1.- Which of the following Java operators can be used with boolean variables? (Choose all that apply.)

Respuestas:

- ==
- !
- Cast with (boolean)

2.- What data type (or types) will allow the following code snippet to compile? (Choose all that apply.)

        byte apples = 5;

        short oranges = 10;

        _____ bananas = apples + oranges;

Respuestas:

- int
- long
- double

3.- What change, when applied independently, would allow the following code snippet to compile? (Choose all that apply.)

        long ear = 10;

        int hearing = 2 * ear;

Respuestas:

- Cast ear on line 4 to int.
- Change the data type of ear on line 3 to short.
- Change the data type of hearing on line 4 to long.

4.- What is the output of the following program?

```
1: public class CandyCounter {
2:          static long addCandy(double fruit, float vegetables) {
3:          return (int)fruit+vegetables;
4: }
5:
6: public static void main(String[] args) {
7:          System.out.print(addCandy(1.4, 2.4f) + "- ");
8:          System.out.print(addCandy(1.9, (float)4) + "-");
9:          System.out.print(addCandy((long)(int) (short)2, (float)4)); } }
```

Respuestas:

- The code does not compile because of line 9.

5. What are the unique outputs of the following code snippet? (Choose all that apply.)

```
int a = 2, b = 4, c = 2;
System.out.println(a > 2 ? --c : b++);
System.out.println(b = (a!=c ? a : b++));
System.out.println(a > b ? b < c ? b : 2 : 1);
```

Respuestas:

- 1
- 4
- 5

6. Given the following code snippet, what is the value of the variables after it is executed? (Choose all that apply.)

```
int ticketsTaken = 1; int
ticketsSold = 3;

ticketsSold += 1 + ticketsTaken++;  ticketsTaken *= 2;

ticketsSold += (long)1;
```

Respuestas:

- ticketsSold is 6
- ticketsTaken is 4

7. What is the output of the following code snippet? (Choose all that apply.)

```
3: int temperature = 4;

4: long humidity = -temperature + temperature * 3;

5: if (temperature>=4)

6:          if (humidity < 6) System.out.println("Too Low");

7:        else System.out.println("Just Right");

8: else System.out.println("Too High");
```

Respuestas:

- Just Right

8. Which statements, when inserted independently into the following blank, will cause the code to print 2 at runtime? (Choose all that apply.)

```
int count = 0;

BUNNY: for(int row = 1; row <=3; row++) RABBIT: for(int
     col = 0; col <3 ; col++) {  if((col + row) % 2 == 0)

                     _____;

               count++;

     }
System.out.println(count);
```

Respuestas:

- <mark>break</mark>

9. What is the output of the following code snippet?

```
2: boolean keepGoing = true;

3: int result = 15, meters = 10;

4: do {

5:        meters--;

6:         if(meters==8) keepGoing = false;

7:        result -= 2;

8:         } while keepGoing;

9: System.out.println(result);
```

Respuestas:

- <mark>The code does not compile for a different reason.</mark>

10. What is the output of the following code snippet? (Choose all that apply.)

```
 9: int w = 0, r = 1;

10: String name = "";

11: while(w < 2) {

12:       name += "A";

13:       do {

14:               name += "B";

15:                   if(name.length()>0) name += "C";
16:               else break;
17:       } while (r <=1);
18:       r++; w++; }
19:       System.out.println(name);
```

Respuestas:

- <mark>The code compiles but never terminates at runtime.</mark>

11. What is output by the following code? (Choose all that apply.)

1: public class Fish {

2:          public static void main(String[] args) {
3:                    int numFish = 4;
4:                     String fishType = "tuna";
5:                      String anotherFish = numFish + 1;
6:                              System.out.println(anotherFish + " " + fishType);
7:                       System.out.println(numFish + " " + 1);
8: } }

Respuestas:

1. <mark>4 1</mark>
2. <mark>5 tuna</mark>

12. What is the result of the following code?

7: StringBuilder sb = new StringBuilder();

8: sb.append("aaa").insert(1, "bb").insert(4, "ccc");

9: System.out.println(sb);

Respuestas:

- <mark>abbaccca</mark>

13. What is the result of the following code?

```
12: int count = 0;
13: String s1 = "java";
14: String s2 = "java";
15: StringBuilder s3 = new StringBuilder("java");
16: if (s1 == s2) count++;
17: if (s1.equals(s2)) count++;
18: if (s1 == s3) count++;
19: if (s1.equals(s3)) count++;
20: System.out.println(count);
```

Respuestas:

- The code does not compile.

14. What is the result of the following code?

```
public class Lion {  public void roar(String roar1, StringBuilder
        roar2) {  roar1.concat("!!!");

                roar2.append("!!!");

        }

        public static void main(String[] args) {

                String roar1 = "roar";

                StringBuilder roar2 = new StringBuilder("roar");  new
                Lion().roar(roar1, roar2);

                System.out.println(roar1 + " " + roar2);

}}
```

Respuestas:

- roar roar!!!

15. Which of the following can replace line 4 to print "avaJ"? (Choose all that apply.)

3: var puzzle = new StringBuilder("Java");

4: // INSERT CODE HERE

5: System.out.println(puzzle);

Respuestas:

- puzzle.reverse();
- puzzle.append("vaJ$").delete(0, 3).deleteCharAt(puzzle.length() - 1);